

Dear Scientists,

Thanks for signing up to the Solar Cell Challenge this year!

Your challenge is to generate electricity from light!

The way you are going to do this is by creating your very own **dye-sensitised solar cell (DSSC)**.

In this pack you will find several useful documents including:

- Information on how to **submit your results** and **win prizes!**
- Three entry forms (one for each of the 2-3 people in your team) for your parents to fill in and upload with your results as well as the challenge T&Cs.
- An introduction cartoon that explains a bit about what a solar cell is and how it works.
- A method for your DSSC construction (with parts in **GREEN** for you to adjust and experiment with).

Don't worry. If you happen to lose any of this, your teacher has access to spare copies online.

Remember, before you get started:

- Your teacher is always the person to go to for experimental advice and safety issues.
- You should always wear the appropriate PPE and follow the safe experimentation guidelines as indicated to you by your teacher and your school's risk assessment.
- You should work in a team of two-three students to complete this challenge.
- You have enough equipment to create three DSSCs. Try and change things if it doesn't work the first time - that's what experimentation is all about!
- Your solar cell may not work and that's OK! It's not an easy challenge to succeed at and even our scientists must sometimes try their experiments many times before they work. Either way, we want you to record how you went, let us know and you can still **win prizes!** It's giving it a go that counts the most!

We cannot wait to see how your challenge goes and hope that you have a great time experimenting!

Remember to be creative, work as a team and always be safe!

Best of luck!

Joshua Ezackial
Outreach Officer for the ARC Centre of Excellence in Exciton Science



ENTRY SUBMISSION

Before you start experimenting, decide with your team, how it is that you would like to submit your results? We will be sending you an online google form to complete with a section in which we call 'Evidence of Experiment'. In this section of the form, you will be able to upload evidence of your team completing the project.

So, what format should our team submit our evidence in?

The form of this evidence is completely up to you! Just ensure that your evidence can be submitted in a digital format for upload and that the file size is **no larger than 1GB**.

Ideas include:

- Taking photos of your process/result
- Creating a video (edited or not) of your process/result
- Creating an animation about your process/result
- Writing a story/cartoon/journal/lab-report about your process/result
- Creating a digital poster about your process/result



Remember that you can only upload ONE file. So, if you have a series of photos as evidence for example, ensure you create a collage/multi-page document for upload (as a PDF for example). As a note, videos should be no longer than 2 minutes long.

What should we include in our evidence?

The level of detail will be completely up to you with your evidence. We hope that you are both **scientific and creative** in how you present your evidence.

Think about including:

- A summary of the process YOUR team went through to complete the challenge
- A summary of the errors and improvements you made to the method
- A summary of how your solar cell came together - how it looked, the voltage/current you generated, etc
- Any other interesting scientific findings you came across during the experiment

This is your chance to **be creative** and show us what happened!

What else will we be asked in the entry submission form?

The entry submission form will ask you to provide details such as:

- Details about your team and members
- The errors and improvements you made to the experiment
- Your results (including the above-mentioned evidence of experiment upload)
- What you learned and your feedback about the challenge

So how do we access the entry submission form?

Your teacher will be emailed a link to the entry submission form soon. If this email is lost, a link to the entry submission form will be found on our website at <https://excitonscience.com/solar-cell-challenge>

Prizes?

We will be providing a participation prize pack to every team that attempts the challenge and submits a result. We will have several special prizes for teams that have been particularly creative and/or provided especially detailed evidence in their results submission.

ENTRY FORM

Every member of your Solar Cell Challenge team must fill in a copy of this Entry Form, provide it to their teacher and the teacher will submit the form along with your challenge entry. Please also read and be aware of the Challenge Terms and Conditions on the next page of this document.

Student details

Student name (first and surname)	
Year level	
I will complete/have completed the Solar Cell Challenge as a part of (choose one)	<input type="checkbox"/> Class <input type="checkbox"/> Extra-curricular activity/extension program <input type="checkbox"/> Other: _____
My team member's name(s) is/are	

Image and content consent release

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Relationship to student	
Email or Phone	
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Signature of supervising teacher	
Date	

TERMS AND CONDITIONS

- The Exciton Science Solar Cell Challenge is open to residents of Australia only.
- Entrants in the Exciton Science Solar Cell Challenge must be completing years 7-12 secondary education in 2023
- Entrants in the Exciton Science Solar Cell Challenge must complete an entry form and submit this form along with their challenge entry.
- Entries should be completed and submitted following the spirit of the competition which is to encourage creativity, scientific communication and exploration of scientific techniques
- Inappropriate images including but not limited to those depicting nudity, violence, unsafe activities, substance abuse or misconduct will not be accepted.
- The ARC Centre of Excellence in Exciton Science reserves the right to disqualify any entries.
- The entry must be the creation of the student and minimal teacher or parental help should be provided except in the case of technical support and to ensure safety.
- The entrant must exclusively own all intellectual property in the images submitted. Proof of ownership may be required, and the entrant agrees to complete all such documentation as may reasonably be requested to confirm such proof of ownership.
- Participants, teachers and parents must always prioritise safety when creating their entry. They should refer to provided Safety data documentation and seek further details if necessary.
- It is the responsibility of the teacher to complete and/or ensure that a risk assessment is prepared prior to experimentation by students.
- Participants should only complete the experimental components of the Exciton Science Solar Cell Challenge under the supervision of a qualified teacher or technician.
- To the extent permitted by law, The ARC Centre of Excellence in Exciton Science excludes all liability to entrants for any loss, damage, claim or expense that entrants suffer or incur in connection with this competition.
- Only one competition entry per team will be accepted.
- Prizes will be allocated by the The ARC Centre of Excellence in Exciton Science Outreach team.
- The decision of the judges is final, and no correspondence will be entered into.
- Late, illegible, incomplete, defaced or corrupt entries may not be accepted. No responsibility can be accepted for lost entries and proof of transmission will not be accepted as proof of receipt. Entries must not be sent through agencies or third parties.
- All prize receivers will be notified accordingly. If any of the chosen entries do not respond within two weeks, an alternative prize recipient will be chosen.
- A list of prize recipients may be published on the The ARC Centre of Excellence in Exciton Science website. Only the First name, School, Year level and region of the winners will be disclosed.
- Prizes are subject to availability.
- No cash alternative for any prizes will be offered.
- The prize recipients may be requested to partake in media activity relating to the competition.
- Due to the current uncertainty regarding coronavirus (COVID-19) lockdowns etc. delivery of prizes may take longer than usual. We will keep in touch regarding delivery.

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